

Xiaoli Zhou

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APPOINTMENTS & EDUCATION

- NOAA/CIRES:** Chemical Sciences Laboratory, R/CSL9; Cloud, Aerosol, & Climate group (Boulder, CO) 2020-
PRESENT
Research Associate (Research Scientist II)
- University of Washington:** Department of Atmospheric Sciences (Seattle, WA) 2017-2020
Postdoctoral Research Associate
Mentor: Christopher S. Bretherton
- McGill University (Montréal, Canada):**
- Ph.D., Atmospheric & Oceanic Sciences 2017
Thesis title: Microphysical-Macrophysical Interactions in Marine Stratocumulus
- M.S., Atmospheric & Oceanic Sciences 2014
Thesis title: Clouds, Precipitation and Marine Boundary Layer Structure during the MAGIC field Campaign
Supervisor: Pavlos Kollias
- Nanjing Univ. of Information Science and Technology (NUIST; Nanjing, China):** 2009
B.S., Atmospheric Science

INDUSTRIAL APPOINTMENT(S)

- China Cargo Airline Ltd., Operation Control Center (Shanghai, China) 2009-2012
Meteorological Technician

NONDEGREE EDUCATION AND TRAINING

National Aeronautics and Space Administration, Goddard Institute for Space Studies (NASA GISS, New York) Conduct collaborative research relevant to climate impact of clouds and aerosols	Aug.-Oct. 2015
University of Cologne, Institute of Geophysics and Meteorology (Cologne, Germany) Conduct collaborative research relevant to influence of drizzle on stratocumulus and organization	May-Jul. 2014
ITaRS Summer school in aerosol remote sensing, processes & applications (Romania)	Sept. 2013
Air Traffic Management Bureau of East China, Department of Meteorology (ATMB; Shanghai, China) Certification program for Aeronautical Meteorological Forecaster	Aug. 2009- Feb. 2010

HONORS AND AWARDS

Dr. & Mrs. Milton Leong Fellowships in Science, McGill University	2015
Student Poster Award in the ASR PI Meeting	2014
Grad Excellence Award, McGill University	2012-2014, 2016-2017
Canada Steamship Lines Award, McGill University	2013
Prix Peter Zwack Award, Meteo. & Ocean. Society of Canada	2013
Outstanding Student Scholarship, ATMB	2010
Outstanding Graduate Award; President's Scholarship; Pacemaker to Outstanding Student, NUIST	2009
NUIST Scholarship	2005-2009
Meteo. Bureau Weather Forecaster Certificate, China	2008
Outstanding Tri-A student of NUIST	2006, 2008

INVITED TALKS AND SEMINARS

American Geophysical Union Fall Meeting, San Francisco, CA <i>Understanding mesoscale organization of closed-cell marine stratocumulus using large-eddy simulation</i>	Dec. 2019
Fudan University, Shanghai, China <i>Understanding mesoscale organization of closed-cell marine stratocumulus using large-eddy simulation</i>	Dec. 2019
Nanjing University, Nanjing, China <i>Understanding mesoscale organization of closed-cell marine stratocumulus using large-eddy simulation</i>	Dec. 2019
Pacific Northwest National Laboratory, Richland, WA <i>Understanding mesoscale organization of closed-cell marine stratocumulus using large-eddy simulation and Observations from the ARM Eastern North Atlantic Site</i>	Mar. 2019

University of Cologne, Institute of Geophysics and Meteorology, Cologne, Germany <i>Understanding mesoscale organization of closed-cell marine stratocumulus using large-eddy simulation and Observations from the ARM Eastern North Atlantic Site</i>	Feb. 2019
University of Cologne, Institute of Geophysics and Meteorology, Cologne, Germany <i>Clouds, precipitation, and marine boundary layer structure during the MAGIC field campaign</i>	June 2014
Max Plan Institute for Meteorology, Hamburg, Germany <i>Clouds, precipitation, and marine boundary layer structure during the MAGIC field campaign</i>	June 2014

FIRST-AUTHOR CONFERENCE PRESENTATIONS

27 th IUGG General Assembly, Canada (Oral)	Jul. 2019
2019 ARM PI meeting (Poster)	June 2019
UCP2019-Understanding Clouds and Precipitation, Germany (Poster)	Feb.2019
The Southern Ocean Science Meeting, NCAR (Oral)	Nov.2018
2018 CFMIP Meeting on Clouds, Precipitation, Circulation, and Climate Sensitivity, NCAR (Poster)	Oct. 2018
15 th Conference on Cloud Physics, Canada (Oral)	July 2018
2017 ARM PI meeting (Oral, Poster)	Mar. 2017
2016 AGU Fall Meeting (Poster)	Dec. 2016
2015 ARM PI meeting (Poster)	Mar. 2015
2014 ARM Fall working group meeting (Oral)	Nov. 2014
Univ. of Cologne, Inst. of Geophys. and Meteo., Germany (Oral)	June 2014
First MAGIC workshop, Brookhaven National Lab. (Oral)	May 2014
2014 ARM PI (Principal Investigator) meeting (Oral, Poster)	Mar. 2014
2013 ASR Fall working group meeting (Oral)	Nov. 2013
ITaRS summer school, Romania (Poster)	Sept. 2013

REFEREED PUBLICATIONS

- Zhou, X.**, Kollias, P., & Lewis, E. R. (2015). Clouds, precipitation, and marine boundary layer structure during the MAGIC field campaign. *Journal of Climate*, 28(6), 2420-2442.
- Painemal, D., Chiu, J. Y. C., Minnis, P., Yost, C., **Zhou, X.**, Cadet, M., ... & Kollias, P. (2017). Aerosol and cloud microphysics covariability in the northeast Pacific boundary layer estimated with ship-based and satellite remote sensing observations. *Journal of Geophysical Research: Atmospheres*, 122(4), 2403-2418.
- Zhou, X.**, Heus, T., & Kollias, P. (2017). Influences of drizzle on stratocumulus cloudiness and organization. *Journal of Geophysical Research: Atmospheres*, 122(13), 6989-7003.
- Zhou, X.**, Ackerman, A. S., Fridlind, A. M., Wood, R., & Kollias, P. (2017). Impacts of solar-absorbing aerosol layers on the transition of stratocumulus to trade cumulus clouds. *Atmospheric Chemistry and Physics*, 17(20), 12725-12742.

- Zhou, X.**, Ackerman, A. S., Fridlind, A. M., & Kollias, P. (2018). Simulation of Mesoscale Cellular Convection in Marine Stratocumulus. Part I: Drizzling Conditions. *Journal of the Atmospheric Sciences*, 75(1), 257-274.
- Zhou, X.**, & Bretherton, C. S. (2019). Simulation of Mesoscale Cellular Convection in Marine Stratocumulus: 2. Nondrizzling Conditions. *Journal of Advances in Modeling Earth Systems*, 11(1), 3-18.
- Zhou, X.**, & Bretherton, C. S.. (2019). The correlation of mesoscale humidity anomalies with mesoscale organization of marine stratocumulus from observations over the ARM Eastern North Atlantic Site. *Journal of Geophysical Research: Atmospheres*, 124(24), 14059-14071.
- Zhou, X.**, Atlas R., McCoy I. L., Bretherton, C. S., Bardeen, C., Gettleman A., Lin P., Ming Y. (2020). Evaluation of cloud and precipitation simulations in CAM6 and AM4 using observations over the Southern Ocean. *Earth and Space Science*. Submitted. <https://doi.org/10.1002/essoar.10502913.1>
- Zhou, X.**, Bretherton, C. S. Eastman R., McCoy I. L., Wood R. (2020). Study of scale controlling factors of marine boundary layer mesoscale cells observed from AMSR-E using wavelet analysis. *In prep.*

TEACHING EXPERIENCE

Co-Instructor

Cloud Microphysics and Dynamics, ATM S 535A/ESS 573A (graduate) 2019
Designed and taught six classes, University of Washington

Guest Lecturer

Introduction to Thermodynamics and Cloud Processes, ATM S 340 (undergraduate, primary majors) 2019
University of Washington

Exploring the Atmospheric Sciences, ATM S 220 (undergraduate, non-majors). 2018,2019
 Topic: Low clouds and Climate
University of Washington

Course Assistant

Introduction to Atmospheric Sciences, ATOC 181; Science of Storms, ATOC 184; 2015-2017
 Natural Disasters, ATOC 185
McGill University

PROFESSIONAL SERVICE AND AFFILIATIONS

Founder and Organizer: UW Cloud Research Group (29 members) Dept. of Atmospheric Sciences, University of Washington	2019-2020
Member, Women in Atmos., Dept. of Atmospheric Sciences at UW	2019-2020
Colloquium Committee, Dept. of Atmospheric Sciences University of Washington	2018-2019
Volunteer, World Weather Open Science Conference, Montréal, Canada	2014
Member, American Geophysical Union	
Journal Reviewer: <i>Journal of Advances in Modeling Earth Systems, Journal of Climate, Journal of Geophysical Research: Atmospheres, Geophysical Research Letters, Atmospheric Chemistry and Physics, Quarterly Journal of the Royal, Monthly Weather Review, Meteorological Society, International Journal of Climatology</i>	
Book Reviewer: <i>Elsevier (provider)</i>	

OUTREACH

Member, Antiracism Working Group NOAA Chemical Science Laboratory	2020- PRESENT
Presenter, Science, Technology, Engineering, and Math (STEM) fair at Park Orchard Elementary School, Kent, WA	2019